Claims

1. A one-component polyurethane composition comprising

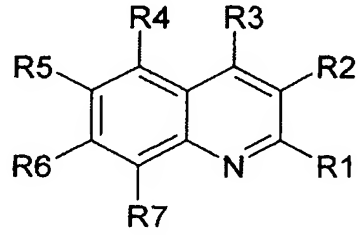
at least one polyurethane prepolymer having terminal isocyanate groups, prepared from at least one polyisocyanate with at least one polyol;

and

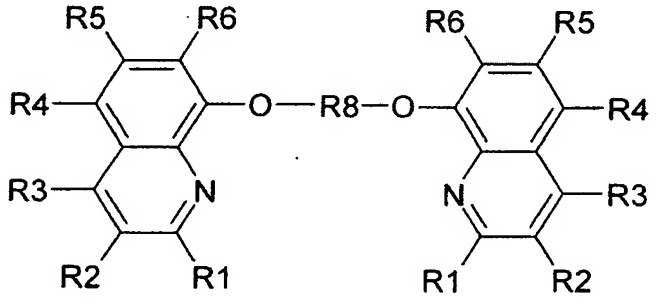
at least one catalyst system which is obtainable from at least one bismuth compound and at least one aromatic nitrogen compound.

2. The one-component polyurethane composition of claim 1, characterized in that the aromatic nitrogen compound has the formula A or B,

A



B



where R1, R2, R3, R4, R5 and R6 each independently of one another are H, methyl, ethyl, propyl, isopropyl, n-butyl, isobutyl, tert-butyl, C_5 to C_{12} alkyl, COOH, COOR' or halogen, R7 is H, methyl, ethyl, C_3 to C_{12} alkyl, OH or OR" and R8 is

alkylene or alkylene ether, and also R' is alkyl and R" is alkyl or alkyl with heteroatoms.

3. The one-component polyurethane composition of claim 2, characterized in that in the aromatic nitrogen compound of the formula A R7 is H, methyl, ethyl, C_3 to C_8 alkyl or $O-(CH_2CH_2O)_x-R'$ or $O-(CH_2CH(CH_3)O)_x-R'$ or positional isomers thereof, with the values for x of 1-6, or is OH, preferably OH.

4. The one-component polyurethane composition of claim 2, characterized in that in the aromatic nitrogen compound of formula B R8 is C_1 to C_8 alkylene or $(CH_2CH_2O)_yCH_2CH_2$ or $(CH_2CH(CH_3)O)_yCH_2CH(CH_3)$ or positional isomers thereof, with the values for y of 0-5, in particular y = 2 or 3.

5. The one-component polyurethane composition of any one of claims 2 to 4, characterized in that in the aromatic nitrogen compound of the formula A or B the substituents R1, R2, R3, R4, R5 and R6 each independently of one another are H or methyl, especially H.

6. The one-component polyurethane composition of any one of the preceding claims, characterized in that the bismuth compound is a bismuth carboxylate $Bi(OOC-R''')_3$, where R''' is a C_5 to C_{17} alkyl radical, especially C_5 to C_{11} alkyl radical, preferably C_7 or C_9 alkyl radical.

7. The one-component polyurethane composition of any one of the preceding claims, characterized in that in the catalyst system the molar ratio of (aromatic nitrogen compound multiplied by the denticity of the aromatic nitrogen compound) to

bismuth is 0.2:1 to 12:1, in particular 0.2:1 to 6:1.

8. The one-component polyurethane composition of any one of the preceding claims, characterized in that the aromatic nitrogen compound enters into a coordinative bond with bismuth.

9. The one-component polyurethane composition of any one of the preceding claims, characterized in that there is also at least one tin compound present.

10. The one-component polyurethane composition of any one of the preceding claims, characterized in that the composition is moisture-curing.

11. A process for preparing the composition of any one of claims 1-10, further comprising a step of preparing the catalyst system by reacting a bismuth compound with at least one aromatic nitrogen compound.

12. The use of the composition of any one of claims 1-10 as an adhesive, sealant, coating or lining.

13. The use of the composition of any one of claims 1-10 as a primer.

14. A method of adhesively bonding, sealing or coating a surface, characterized in that it comprises a step of contacting with a composition of any one of claims 1-10.

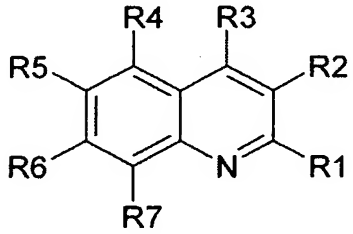
15. The method of claim 14, characterized in that the surface is a paint, preferably an automotive paint, in particular a multiply baked automotive paint.

16. The method of claim 14 or 15, characterized in that it comprises an additional step of curing in air.

17. The method of any one of claims 14-16, characterized in that it further comprises a step of contacting with a water-containing component or an admixture thereof.

18. A catalyst for polyurethane compositions, characterized in that the catalyst is a coordination compound between bismuth and an aromatic nitrogen compound of the formula A or B,

A



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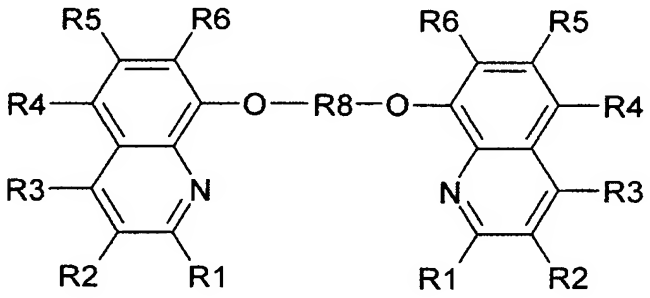

where R1, R2, R3, R4, R5 and R6 each independently of one another are H, methyl, ethyl, propyl, isopropyl, n-butyl, isobutyl, tert-butyl, C_5 to C_{12} alkyl, COOH, COOR' or halogen, R7 is H, methyl, ethyl, C_3 to C_{12} alkyl, OH or OR" and R8 is alkylene or alkylene ether, and also R' is alkyl and R" is alkyl or alkyl with heteroatoms.

19. A catalyst for polyurethane compositions, characterized in that the catalyst is a

coordination compound between bismuth and 8-hydroxyquinoline or between bismuth and tetraethylene glycol bis(8-quinolyl) ether.

20. A process for preparing a polyurethane prepolymer, characterized in that a catalyst of claim 18 or 19 is used for the reaction of at least one polyisocyanate with at least one polyol.